

**Amendments to the Drawings:**

Please replace Fig. 3 with the enclosed "Replacement Sheet" thereof.

## **REMARKS**

Claim 1-30 have been examined and are pending. Claims 1, 16, 20 and 26 have been amended. The Abstract has been replaced and a new Fig. 3 is submitted herewith. None of these amendments presents new matter. Favorable reconsideration and allowance are respectfully requested.

### **Miscellaneous**

The Examiner has requested presentation of Fig. 3 in line form. Applicants respectfully note that Fig. 3 provides a photograph of one large image composed of 100 smaller images. Each smaller image served as a sample collection position as described in Example 2. Hence, this photograph serves to illustrate a spatial resolution for data collection on an actual mixture of cane sugar, microcrystalline cellulose and corn starch. Applicants enclose the best available photograph of Fig. 3 as a replacement drawing sheet. No changes have been made relative to original Fig. 3.

The Abstract has been objected to for exceeding 150 words. Accordingly, the original abstract has been deleted and replaced with an abstract of an appropriate length. The revised abstract consists of the text from the "Field of the Invention" section followed by original Claim 1 (with slight grammatical changes).

### **The 112 Rejections**

Claims 1-30 have been rejected under 35 U.S.C. § 112, first paragraph, as allegedly lacking enablement for failing to indicate the spatial resolution of data acquisition. In response, Claims 1, 16, 20 and 26 have been amended to recite that the data are obtained at a spatial

resolution sufficient to resolve non-uniformities in the mixture as described in the specification at paragraphs 33-35. Determination of such spatial resolution is within the skill of the art.

Accordingly, Applicants believe this enablement rejection is overcome and respectfully request withdrawal thereof.

Claims 1-30 have been rejected under 35 U.S.C. § 112, second paragraph, as allegedly indefinite. In this regard, the Examiner states it is unclear whether “calculating for each of the top *y* ranked library spectra” means making the calculation for “top one or more” spectra or for “the top plurality” of spectra. Based on the specification at paragraphs 39-41, it is clear that *y* is intended to be a numerical value. Further, the claims indicate that “each of the top *y* . . . spectra” is used in the calculation, again indicating that *y* is a numerical. This meaning is even more apparent when a numerical value is substituted for *y*, for example, “calculating for each of the top *10* ranked library spectra.” Hence, Applicants believe it is clear to those of skill in the art that the calculation is intended to be made for top *y* spectra (*i.e.*, the top plurality). Moreover, those of skill in the art can readily determine what the top *y* spectra are without undue burden. Accordingly, Applicants believe that the claims as presently drawn are clear and unambiguous to those of skill in the art and believe this rejection is overcome.

### **The 102 rejection**

Claims 1, 2, 14, 15, 16, 18, 20, 21, 22, 26 and 28 have been rejected under 35 U.S.C. § 102 (e) as allegedly anticipated by U.S. Patent Application Publication No. 20040024539 to Gard *et al.* (“Gard”).

Gard discloses a method of analyzing individual aerosol particles to identify those particles, wherein each spectrum is obtained from a single component after physical separation

from a mixture and not directly from mixtures of components. Gard may start with a mixture of particles, but the components are separated using a mass spectrometer before any spectral data are obtained, *i.e.* Gard first discloses “physical unmixing” and not “spectral unmixing.” In contrast, the present invention begins by obtaining a set of spectral data for a mixture of components, and applies analytical calculations to identify the individual components. Nowhere does Gard disclose, teach or suggest any method for deconvoluting a complex spectrum representing a mixture of components. Hence, Gard does not disclose all the elements of the present invention as claimed and therefore fails to anticipate the subject matter of Claim 1.

Accordingly, Applicants submit this rejection under 35 U.S.C. §102(e) should be withdrawn and respectfully request such action.

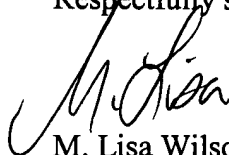
#### **The 103 rejection**

Claims 17, 19, 29 and 30 have been rejected under 35 U.S.C. § 103(a) as allegedly rendered obvious by Gard in view of U.S. Patent No. 6,490,530 to Wyatt (“Wyatt”). Wyatt discloses a network of aerosol detector stations for early warning of hazardous, airborne particles. The Examiner has cited Wyatt for its discussion of the placement of the detectors and analyzing data trends over time. Wyatt, however, fails to provide any disclosure, teaching or suggestion for spectral analysis in accordance with the claimed subject matter. Thus, without Gard as a primary reference, Wyatt fails to motivate those of skill in the art to make the claimed invention. Accordingly, Applicants submit this rejection under 35 U.S.C. §103(a) should be also be withdrawn.

## Conclusion

For all the foregoing reasons, Applicants believe this case is in condition for allowance which action is earnestly solicited. If a telephone conference would be of assistance in advancing prosecution hereof, Applicants' undersigned representative invites the Examiner to telephone at 212-692-1092.

Respectfully submitted,



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